|  |
| --- |
| Table 1. Summary of Research Findings Concerning COVID-19 Vaccine Hesitancy |
| Category | Findings | Source |
| Contextual influences | Respondents who said that they trusted their government were more likely to accept a vaccine | Lazarus 2020, Dodd et al 2020 |
| Cases and mortality per million of a nation’s population were associated with a higher likelihood of vaccine acceptance | Lazarus 2020, Reiter et al 2020 |
| Being moderate or liberal in political leaning increased the willingness to get vaccinated  | Reiter et al 2020 |
| The willingness to get vaccinated is high among respondents with chronic disease | Reiter et al 2020 |
| Age younger than 25 years decreased the willingness to get vaccinated  | Lazarus 2020, Neumann‑Böhme et al 2020 |
| Younger or older ages increase vaccine acceptance | [Palamenghi et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-22), Reiter et al 2020, [Detoc et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11), Neumann‑Böhme et al 2020 |
| Age does not affect vaccine acceptance  | Dror et al 2020 |
| Men are slightly less likely to accept the vaccine | Lazarus 2020 |
| Men are more likely to take the vaccine | Wong et al 2020, Qiao 2020, Dror et al 2020, [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11), Neumann‑Böhme et al 2020 |
| Having a child is a negative predictor for accepting future vaccination | [Dror et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-6) |
| Higher levels of education were associated positively with vaccine acceptance | Lazarus 2020, Qiao 2020Dodd 2020 |
| Recent or upcoming travel outside of the country increases the willingness to take the vaccine | Reiter et al 2020 |
| People were less likely to accept the vaccine if their employer required it | Lazarus 2020 |
| Being retired was associated with less acceptance compared with civil servants | [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11) |
| Those with a higher income were more likely to accept a vaccine than those with a lower income | Lazarus 2020 |
| Individual and group influences | People currently vaccinated against seasonal influenza had a strong tendency to accept a future COVID-19 vaccine | Dror et al 2020 |
| Higher intention to receive the COVID-19 vaccine existed among responders who lost their job during the crisis | Dror et al 2020 |
| Perceptions toward general vaccination were associated with COVID-19 acceptance | [Palamenghi et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-22) |
| Trust in scientific research was associated with vaccine hesitancy | [Palamenghi et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-22) |
| Inadequate health literacy was associated with vaccine hesitancy | Dodd el al 2020 |
| Higher levels of perceived likelihood to get a COVID-19 infection increased the willingness to get the vaccine | Reiter et al 2020, [Dror et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-6), [Graffigna et al 2020, Palamenghi, et](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-8) al 2020, [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11), [Detoc et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11), Wong et al 2020 |
| Perceived vaccine benefits had significant odds of a definite intention to receive the COVID-19 vaccine | Wong et al 2020 |
| Risk exposures were negatively associated with vaccine acceptance | Qiao 2020 |
| Perceived susceptibility was not significantly associated with vaccine acceptance among college students | Qiao 2020 |
| Perceived vaccine risk was associated with COVID-19 vaccine acceptance | [Detoc et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-5) |
| Perceived severity of COVID-19 was a predictor of intention to receive the vaccine | Reiter et al 2020, [Dror et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-6), [Graffignaet al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-8), Qiao 2020 |
| Working in the health care system or caring for COVID-19 patients was positively associated with COVID-19 vaccine acceptance | [Detoc et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-5),  [2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-6), [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11), [Wong et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-31) |
| A higher level of fear about COVID-19 was related to higher vaccine acceptance | [Detoc et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-5), Qiao 2020, [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11) |
| People who reported COVID-19 sickness in themselves or family members were no more likely to accept the vaccine | Lazarus 2020 |
| Respondents were more willing to receive the vaccine if their doctor recommended it | Reiter et al 2020 |
| Respondents who stated that they thought COVID-19 was not dangerous totheir health were not willing to be vaccinated | Neumann‑Böhme et al 2020 |
| Vaccine- and vaccination-specific issues | Participants who had no worries about the possible side effects of a COVID-19 vaccination had higher intention to get the vaccine | Wong et al 2020, Reiter et al 2020, Neumann‑Böhme et al 2020 |
| Participants who were worried about the safety of the COVID-19 vaccine had lower intention to get the vaccine | Neumann‑Böhme et al 2020 |
| Perceived effectiveness of a COVID-19 vaccine increased vaccine acceptance | Reiter et al 2020, [Harapan et al 2020](https://www.medrxiv.org/content/10.1101/2020.11.26.20239483v1.full-text%22%20%5Cl%20%22ref-11) |
| Respondents were more willing to receive the vaccine if their doctor recommended it | Reiter et al 2020 |

Table 2. Descriptive Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| Variable |  | Full sample, %(N = 504) | Vaccine-hesitancy sample, % (N = 304) |
| Gender   | Male  |  49.3 | 44.7 |
| Female | 50.7 | 55.3 |
| Religiousness | Secular | 51.6 | 49.3 |
| Conservative |  28.8 | 34.9 |
| Orthodox |  14 | 12.5 |
| Strict orthodox | 5.8 | 3.3 |
| Income | Well above average | 4.5 | 3.3 |
| Above average | 19.6 | 18.4 |
| Average | 25.4 | 26.3 |
| Below average | 26.5 | 27.3 |
| Well below average | 24.0 | 24.7 |
| Educational level | Some high school  | 32.5 | 35.5 |
| High school diploma | 19.1 | 18.4 |
| Bachelor’s degree | 30.6 | 31.3 |
| Higher degrees | 17.8 | 14.8 |

Table 3. Regression Results for the Contextual Influences Variable

|  |  |  |
| --- | --- | --- |
|  | Full sample | Vaccine-hesitant sample |
| Variable | B | Std. Error | Sig | B | Std. Error | Sig |
| (Constant) | –4418.43 | 1077.064 | .00 | –2656.96 | 854.82 | .00 |
| Gender   | .44 | .108 | .00 | .27 | .09 | .00 |
| Age | –.02 | .005 | .00 | –.00 | .00 | .37 |
| Income     | .09 | .048 | .05 | .01 | .04 | .83 |
| Educational level    | –.06 | .034 | .10 | –.01 | .08 | .73 |
| Residence type | .16 | .137 | .24 | .07 | .10 | .48 |
| Religiousness | .23 | .065 | .00 | .05 | .05 | .34 |
| Has children  | .16 | .135 | .24 | .05 | .11 | .63 |
|  | Adjusted *R*2 = 0.143; *P* = .00 | Adjusted *R*2 = 0.024; *P* = .046 |

Table 4. Regression Results for the Health Record and Behavior Variables

|  |  |  |
| --- | --- | --- |
|  | Full sample | Vaccine-hesitant sample |
| Variable | B | Std. Error | Sig | B | Std. Error | Sig |
| (Constant) | .29 | 1.07 | .79 | 1.89 | .99 | .06 |
| Basic health insurance  | .18 | .25 | .46 | .11 | .19 | .57 |
| Additional health insurance  | –.279 | .15 | .07 | –.12 | .12 | .36 |
| Health status | .06 | .12 | .65 | –.00 | .10 | .98 |
| Chronic disease | .42 | .19 | .03 | .19 | .17 | .24 |
| # Of people  | .00 | .00 | .39 | .00 | .00 | .32 |
| # Of people at risk  | –.00 | .01 | .74 | .01 | .09 | .54 |
| Follows instructions | .25 | .09 | .01 | .16 | .08 | .13 |
| Has been sick | –.57 | .33 | .09 | –.26 | .25 | .31 |
| Has been around sick people | .20 | .15 | .19 | .07 | .13 | .60 |
| Has vaccinated own children | .91 | .50 | .07 | .56 | .48 | .24 |
| Health behavior routine | .06 | .08 | .50 | –.06 | .07 | .39 |
| Influenza vaccine | .19 | .04 | .00 | .12 | .04 | .00 |
|  | Adjusted *R*2 = 0.120; *P* = .00 | Adjusted *R*2 = 0.053; *P* = .049 |

Table 5. Regression Results for the Perceived Health Attitudes Variables

|  |  |  |
| --- | --- | --- |
|  | Full sample | Vaccine hesitancy sample |
| Variable | B | Std. Error | Sig | B | Std. Error | Sig |
| (Constant) | .99 | .37 | .00 | 1.71 | .32 | .00 |
| Knowledge | –.05 | .05 | .35 | –.07 | .05 | .18 |
| Update frequency | .01 | .03 | .71 | .02 | .03 | .46 |
| Fake news  | .03 | .04 | .51 | .08 | .04 | .05 |
| General trust | .20 | .08 | .01 | .15 | .08 | .05 |
| Vaccine-company trust  | .35 | .08 | .00 | .23 | .08 | .00 |
| Susceptibility | .14 | .07 | .05 | .10 | .06 | .11 |
| Severity | .06 | .07 | .37 | .03 | .07 | .67 |
| Benefits | .41 | .06 | .00 | .23 | .05 | .00 |
| Barriers | –.36 | .05 | .00 | –.19 | .05 | .00 |
| Influence | –.00 | .00 | .05 | –.00 | .00 | .01 |
|  | Adjusted *R*2 = 0.584; *P* = .00 | Adjusted *R*2 = 0.324; *P* = .00 |

Table 6. Final Model of Willingness to Accept the COVID-19 Vaccine

|  |  |  |
| --- | --- | --- |
|  | Full sample | Vaccine-hesitant sample |
| Variable | B | Std. Error | Sig | B | Std. Error | Sig |
| (Constant) | –1776.17 | 746.22 | .02 | –1756.07 | 710.54 | .01 |
| Gender   | .18 | .08 | .02 | .17 | .07 | .01 |
| Age | –.09 | .00 | .00 |  |  |  |
| Income     | .08 | .03 | .02 |  |  |  |
| Religiousness | .10 | .04 | .03 |  |  |  |
| Influenza vaccine | .07 | .02 | .01 | .09 | .02 | .00 |
| General trust | .15 | .07 | .04 |  |  |  |
| Vaccine-company trust  | .37 | .08 | .00 | .24 | 4.48 | .00 |
| Susceptibility | .14 | .06 | .01 |  |  |  |
| Benefits | .38 | .05 | .00 | .26 | .05 | .00 |
| Barriers | –.31 | .05 | .00 | –.12 | .05 | .01 |
| Influence | –.01 | .00 | .01 |  |  |  |
|  | Adjusted *R*2 = 0.617; *P* = .00 | Adjusted *R*2 = 0.326; *P* = .00 |